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CLAIMS:

What is claimed is:

1.   A method for enabling a transmission control protocol (TCP) off-load, comprising the steps of:
       during establishment of a TCP connection, exchanging at least one queue identification number between a first port and a second port of the TCP connection; and
       inserting at least one queue identification number in outbound data packets, wherein the first port of the TCP connection sends a data packet to the second port of the TCP connection and the second port of the TCP connection sends a data packet to the first port of the TCP connection.

2.   The method as recited in claim 1, wherein the first port of the TCP connection is a sending port and the second port of the TCP connection is a receiving port.

3.   The method as recited in claim 1, further comprising:
       employing a queue identification option to identify a TCP socket.

4.   The method as recited in claim 1, wherein the TCP socket includes a software queue, a hardware queue, and a mixed software queue and hardware queue.

5.   The method as recited in claim 3, wherein employing a queue identification option to identify the TCP socket is employed in at least one of a software and hardware implementation.

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6.   The method as recited in claim 3, wherein the queue identification option is employed to lookup the TCP socket.

7.   The method as recited in claim 6, wherein the queue
5   identification option is employed to lookup the TCP socket for an incoming packet in at least one of a a software or a hardware implementation.

8.   A system for enabling a transmission control protocol (TCP) off-load, comprising:
10   an exchange component, during establishment of a TCP connection, which exchanges at least one queue identification number between a first port and a second port of the TCP connection; and
        an insertion component which inserts at least one
15   queue identification number in outbound data packets, wherein the first port of the TCP connection sends a data packet to the second port of the TCP connection and the second port of the TCP connection sends a data packet to the first port of the TCP connection.

20   9.   The system as recited in claim 8, wherein the first port of the TCP connection is a sending port and the second port of the TCP connection is a receiving port.

10.   The system as recited in claim 8, further comprising:
25   an identification component which employs a queue identification option to identify a TCP socket.

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11. The system as recited in claim 8, wherein the TCP socket includes a software queue, a hardware queue, and a mixed software queue and hardware queue.

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12. The system as recited in claim 10, wherein employing a queue identification option to identify the TCP socket is employed in at least one of a software and hardware implementation.

13. The system as recited in claim 10, wherein the queue identification option is employed to lookup the TCP socket.

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14. The system as recited in claim 13, wherein the queue identification option is employed to lookup the TCP socket for an incoming packet in at least one of a a software or a hardware implementation.